

### **REMARKS**

Upon entry of the instant Amendment, claims 14-20 and 31-46 will be pending in the application. Claim 33 is amended and claims 45 and 46 are added. Support for new claims 45 and 46 can be found in paragraph [0019] of the instant published application No. 2006/0071304. Reconsideration of the rejected claims in view of the following remarks is respectfully requested.

#### ***35 U.S.C. § 102(b) Rejection***

Claims 14-17, 31-34, 36 and 40-44 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,635,753 to HOFFINGER et al.

The Examiner asserted that this document discloses or suggests all the features recited in these claims including the recited substrate contact. Applicants respectfully traverse this rejection.

Notwithstanding the Office Action assertions as to what HOFFINGER discloses, Applicants submit that HOFFINGER fails to disclose, or even suggest, for example, that the substrate contact is arranged adjacent to a side of the source without an intervening shallow trench isolation structure (claim 14) and/or that the substrate contact or ring substrate contact abuts a side of the source or is arranged adjacent to a side of the source without an intervening shallow trench isolation structure (claims 33 and 42).

Applicants do not dispute that HOFFINGER apparently discloses a substrate contact 6 adjacent element 10 and a gate 7 (see Fig. 2). Applicants also acknowledge that HOFFINGER identifies the source and drain regions as elements 10 and 11 (see col. 4, lines 14-15). However, HOFFINGER explains at col. 4, line 16 that the source

region in the “n+”, i.e., element 11 in Fig. 2. Thus, HOFFINGER teaches to arrange a drain region 10 adjacent what the Examiner characterizes as a source contact 6. As such, HOFFINGER does not teach to arrange the so-called substrate contact 6 adjacent the source 11.

Thus, HOFFINGER clearly cannot be read to disclose or suggest that the substrate contact or ring substrate contact abuts a side of the source or is arranged adjacent to a side of the source without an intervening shallow trench isolation structure (claims 14, 33 and 42).

The Examiner also acknowledges that HOFFINGER fails to teach that little or no current flows through the so-called substrate contact 6 and explains that this would occur if the device is “off”. This assertion is improper for at least three reasons: first, the Examiner has failed to explain where in HOFFINGER there can be found support for this assertion; second, this assertion ignores the fact that HOFFINGER specifically provides for using a highly conductive substrate (1) which is in apparent electrical contact with the so-called substrate contact 6; and third, the Examiner’s interpretation necessarily assumes that the disclosed device only has one possible condition, i.e., the off condition, while ignoring the obvious operating condition.

Finally, the Examiner argues that HOFFINGER teaches to make the so-called substrate contact 6 having the form of a ring in Fig. 6. This assertion is not supported by any language in HOFFINGER and the Examiner has not demonstrated otherwise. Furthermore, Fig. 6 shows no contact between element 11 (the disclosed source) and the so-called ring contact 6.

Moreover, Applicants submit that dependent claims 15-17, 31, 32, 36, 40, 41 and 43 are allowable at least for the reason that these claims depend from allowable base claims and because these claims recite additional features that further define the present invention. In particular, Applicants submit that no proper reading of HOFFINGER discloses or even suggests, in combination, the features recited in claims 15-17, 31, 32, 36, 40, 41 and 43 in combination with the features recited in claims 14, 33 and 42.

Applicants request that the Examiner reconsider and withdraw the rejection of the above-noted claims under 35 U.S.C. § 102(b).

### ***35 U.S.C. § 103(a) Rejections***

#### **Over Hoffinger with Herzum**

Claims 20, 35 and 39 were rejected under 35 U.S.C. § 103(a) as being unpatentable over HOFFINGER (incorrectly identified as CHEN) in view of U.S. Patent Application Publication No. 2004/0238871 to HERZUM et al.

The Examiner acknowledged that HOFFINGER lacks, among other features, the recited features of these dependent claims. However, the Examiner asserted that such features are disclosed in HERZUM, and that it would have been obvious to one of ordinary skill in the art to combine the teachings of these documents. Applicants respectfully disagree with the Examiner's assertions and traverse this rejection.

Notwithstanding the Office Action assertions as to each of HOFFINGER and HERZUM discloses or suggests, Applicants submit that neither HOFFINGER and HERZUM discloses, or even suggests, for example, that the substrate contact or ring

substrate contact abuts a side of the source or is arranged adjacent to a side of the source without an intervening shallow trench isolation structure.

As explained above, Applicants do not dispute that HOFFINGER apparently discloses a substrate contact 6 adjacent element 10 and a gate 7 (see Fig. 2). Applicants also acknowledge that HOFFINGER identifies the source and drain regions as elements 10 and 11 (see col. 4, lines 14-15). However, HOFFINGER explains at col. 4, line 16 that the source region in the "n+", i.e., element 11 in Fig. 2. Thus, HOFFINGER teaches to arrange a drain region 10 adjacent what the Examiner characterizes as a source contact 6. HOFFINGER does not, however, teach arranging the so-called substrate contact 6 adjacent the source 11.

HERZUM does not cure the deficiencies of HOFFINGER. Applicants do not dispute that HERZUM discloses that the substrate contact 12 is in electrical contact with the source 14 (see paragraph [0036]). However, HERZUM explains at paragraph [0036] that the current flows from the source to the contact 12. Thus, HERZUM cannot be read to disclose or suggest that little or no current flows through the substrate contact (claim 14). Furthermore, as HERZUM merely explains that the so-called contact 12 is a sinker, the Examiner has failed to explain how the disclosed sinker can be read to disclose or suggest a ring substrate contact (claim 33).

Applicants submit that there is no reason to modify HOFFINGER and HERZUM in a manner which would render obvious Applicants' invention, and additionally, Applicants submit that there is no rationale disclosed or suggested in the prior art to modify the applied reference in the manner suggested by the Examiner. The Examiner's opinion does not provide a proper basis for these features or for the

motivation to modify this document in the manner suggested by the Examiner.

Therefore, Applicants submit that the invention as recited in at least independent claims 14 and 33 is not rendered obvious by any reasonable inspection and interpretation of the disclosure of the applied references.

Finally, Applicants submit that dependent claims 20, 35 and 39 are allowable at least for the reason that these claims depend from allowable base claims and because these claims recite additional features that further define the present invention. In particular, Applicants submit that no proper combination of HOFFINGER and HERZUM discloses or even suggests, in combination, the features recited in claims 20, 35 and 39 in combination with the features recited in claims 14 and 33.

Applicant requests that the Examiner reconsider and withdraw the rejection of the above-noted claims under 35 U.S.C. § 103(a).

Over Hoffinger with Rice

Claims 18 and 19 as well as 37 and 38 were rejected under 35 U.S.C. § 103(a) as unpatentable over HOFFINGER (incorrectly identified as CHEN in the rejection of claims 18 and 19) in view of U.S. Patent No. 4,738,936 to RICE.

The Examiner acknowledged that HOFFINGER lacks, among other features, the recited features of these dependent claims. However, the Examiner asserted that such features are disclosed in RICE, and that it would have been obvious to one of ordinary skill in the art to combine the teachings of these documents. Applicants respectfully disagree with the Examiner's assertions and traverses this rejection.

Notwithstanding the Office Action assertions as to each of HOFFINGER and RICE discloses or suggests, Applicants submit that neither HOFFINGER and RICE discloses, or even suggests, for example, that the substrate contact or ring substrate contact abuts a side of the source or is arranged adjacent to a side of the source without an intervening shallow trench isolation structure.

As explained above, Applicants do not dispute that HOFFINGER apparently discloses a substrate contact 6 adjacent element 10 and a gate 7 (see Fig. 2). Applicants also acknowledge that HOFFINGER identifies the source and drain regions as elements 10 and 11 (see col. 4, lines 14-15). However, HOFFINGER explains at col. 4, line 16 that the source region in the "n+", i.e., element 11 in Fig. 2. Thus, HOFFINGER teaches to arrange a drain region 10 adjacent what the Examiner characterizes as a source contact 6. HOFFINGER does not, however, teach arranging the so-called substrate contact 6 adjacent the source 11.

RICE does not cure the deficiencies of HOFFINGER. Applicants do not dispute that RICE discloses an FET with a source contact (see title). However, the Examiner has failed to identify any language in RICE which discloses or suggests that little or no current flows through the substrate contact (claim 14). Furthermore, the Examiner has failed to explain how the disclosed source contact can be read to disclose or suggest a ring substrate contact (claim 33).

Applicants submit that there is no reason to modify HOFFINGER and RICE in a manner which would render obvious Applicants' invention, and additionally, Applicants submit that there is no rationale disclosed or suggested in the prior art to modify the applied reference in the manner suggested by the Examiner. The Examiner's opinion

does not provide a proper basis for these features or for the motivation to modify this document in the manner suggested by the Examiner. Therefore, Applicants submit that the invention as recited in at least independent claims 14 and 33 is not rendered obvious by any reasonable inspection and interpretation of the disclosure of the applied references.

Finally, Applicants submit that dependent claims 18, 19, 37 and 38 are allowable at least for the reason that these claims depend from allowable base claims and because these claims recite additional features that further define the present invention. In particular, Applicants submit that no proper combination of HOFFINGER and RICE discloses or even suggests, in combination, the features recited in claims 18, 19, 37 and 38 in combination with the features recited in claims 14 and 33.

Applicant requests that the Examiner reconsider and withdraw the rejection of the above-noted claims under 35 U.S.C. § 103(a).

***New Claims are also Allowable***

Applicants submit that the new claims 45 and 46 are allowable over the applied art of record. Specifically, claims 45 and 46 depend from claims which are believed to be allowable and recite a combination of features which are clearly not disclosed or suggested by the applied art of record. Accordingly, Applicants respectfully request consideration of these claims and further request that the above-noted claims be indicated as being allowable.

### CONCLUSION

In view of the foregoing amendments and remarks, Applicants submit that all of the claims are patentably distinct from the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue. The Examiner is invited to contact the undersigned at the telephone number listed below, if needed. Applicants hereby make a written conditional petition for extension of time, if required. Please charge any deficiencies in fees and credit any overpayment of fees to Deposit Account No. 09-0458.

Respectfully submitted,  
Basanth JAGANNATHAN, *et al.*

A handwritten signature in black ink, appearing to read 'Andrew M. Calderon', written over a horizontal dashed line.

Andrew M. Calderon  
Reg. No. 38,093

January 17, 2008  
GREENBLUM & BERNSTEIN, P.L.C.  
1950 Roland Clarke Place  
Reston, VA 20191  
(703) 716-1191